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C L A I M S

1. Grinding machine for blades corresponding to a turbine or a compressor rotor, including
- a machine bench (3), supporting a rotor (2) of several
5 periods (2a) of blades rotating at high speed,
 - a grinding wheel head (6) foreseen of two grinding wheels for grinding (7, 7') which are commutable one for the other, in the grinding position faced to the rotor blades (2a) for the grinding of successive rotors (2),
10 - a device (12 - 15) of individual shaping of each grinding wheel (7, 7'), foreseen of a respective shaping tool (12, 13) and means (14 - 15) for their linear movement (U, C) respect to the grinding wheel,
 - an electronic control unit (16) foreseen of a numerical
15 control CNC to control the rotor (2) and the grinding wheel head (6) displacements in an axial direction Z and in the radial directions (X) respect to the rotor and angular (B) and the mentioned displacements (U, C) of the shaping device (12 - 15),
20 - an optical system (16 - 24) to measure the radius (R) of the blades (2) of the rotor period (2a) being rectified, connected to the bench (3) of the machine and foreseen of an optical sensor (19) lined up with the mentioned rotor period (2a) in rotation and one of the
25 mentioned grinding wheels (7, 7'),
 - the mentioned head (6) is supported on a rotary carriage (8) of the head and two linear carriages (9, 10) of the head carrying out the mentioned displacements Z, X, B of the head (6), calculated from the geometric data
30 (D1, D2, 30) relative to the two grinding wheels (7, 7'), for the positioning of a second grinding wheel (7') for the grinding of a second consecutive rotor (2),
 - characterized in that the mentioned system (16 - 24)
35 for the radius R measuring of the blades in cooperation

- 1 with the control unit (16) carries out a continuous detection of burrs on the blades (2a) during the grinding by means of a measuring of the perturbations of the mentioned radius R, and in that
- 5 - the mentioned individual shaping device (12, 13) is mounted on a supporting carriage (14, 15) in a position relative to the associated grinding wheel head (6), and which operates automatically, carrying out the shaping tool (12, 13) the mentioned displacement (U, C) and
- 10 shaping the grinding wheel (7, 7') in function of the mentioned continuous detection of burrs by the measuring system (16 - 24), without stopping the rotor (2) grinding process with the grinding wheel (7, 7').
- 15 2. Grinding machine for rotor blades according to claim 1, characterized in that the two grinding wheels (7, 7') are situated one at each side of the head and the mentioned tool (12, 13) of individual shaping is supported on a carriage (14, 15) incorporated to the head
- 20 (6) and projected above it connected to a screw (14', 15') belonging to the carriage (14, 15), carrying out the vertical approaching movements to the grinding wheel (7, 7') and a forward movement during the shaping.
- 25 3. Grinding machine for rotor blades according to claim 1, where the mentioned optical sensor (19) is supported on a carriage (18), which can be moved in a direction "Y" to carry out a horizontal radial forward movement towards the blade period (2a) of the rotor in operation, and it
- 30 has two opposed arms, light issuer and receiver (19a, 19b) which are situated covering the rotor period (2a).